



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/735,473

12/12/2003

Barbanti Giovanni

S2205-72130

2475

32009

7590

11/28/2005

BRADLEY ARANT ROSE & WHITE LLP
200 CLINTON AVE. WEST
SUITE 900
HUNTSVILLE, AL 35801

EXAMINER

PREVIL, DANIEL

ART UNIT

PAPER NUMBER

2636

DATE MAILED: 11/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/735,473

Applicant(s)

GIOVANNI, BARBANTI

Examiner

Daniel Previl

Art Unit

2636

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claims 1-15 are presented for examination.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites "the functioning" in line 1, "the inflating condition", "the tire pressure", "the pre-established value"; there is insufficient antecedent basis for these limitations in the claim.

Claim 5 recites "the electric generators"; there is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites "the group commutes the switch"; there is insufficient antecedent basis for this limitation in the claim and it is unclear about which group Applicant refers to?.

Claim 9 recites "the pre-fixed sequence"; there is insufficient antecedent basis for this limitation in the claim.

Claim 10 recites "the signal of right functioning"; there is insufficient antecedent basis for this limitation in the claim.

Claim 10 recites "the total number of which is equal to the number of wheels of the vehicle" is unclear for examiner.

Claim 11 recites "the first received code"; there is insufficient antecedent basis for this limitation in the claim.

Claims 2-4, 7-8, 12-15 are rejected for the same reason since they depend from rejected claim.

Claim Objections

3. Claim 15 is objected to because of the following informalities: Claim 15, line 2, the phrase "capable of" is not a positive limitation but only require the ability to so perform. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-11, 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barbanti Giovanni (EP 0 893 284 A1) in view of Mendez et al. (US 5,612,671).

Regarding claim 1, Barbanti discloses a system for transmitting a signal indicating the functioning condition of a tire (col. 7, lines 25-43); the system cooperates with a device signaling the inflating condition of the tire in a first loading position when the tire pressure is higher than the pre-established value (col. 10, lines 25-36); in a second unloading position when the tire pressure is

Art Unit: 2636

lower than a pre-established value and therefore, the tire is not suitable for a standard use (col. 10, lines 36-41); the system is characterized by the fact that it is fitted with a switch commuting from a first to a second condition which is opposite the first one when the group passes the first loading position to the second unloading position to activate an apparatus sending a warning (signaling display) (col. 10, lines 48-49) picked up by a receiver (transparent visor) (col. 10, line 49) (col. 10, lines 25-56).

Barbanti discloses all the limitations above but fails to explicitly disclose the movable group consisting of at least a sensor, an amplifier, a transducer and an actuator.

However, Mendez discloses the movable group consisting of at least a sensor (fig. 1), an amplifier (antenna 16) (fig. 1, ref. 16), a transducer (col. 1, lines 13-20) and an actuator (activator) (col. 2, line 50).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Mendez in Barbanti. Doing so would modify Barbanti's system with Mendez's system in order to provide accurate information related to a low tire pressure thereby displaying a warning to the driver to ensure a safe driving wherein precluding regrettable accidents that can lead to property damaged and severe injury even death as taught by Mendez (col. 1, lines 6-50).

Regarding claim 2, Barbanti and Mendez disclose all the limitations in claim 1 and Mendez further discloses the receiver is located aboard the vehicle (receiver 18 is located aboard the vehicle 10) (fig. 1; col. 2, lines 34-43). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Mendez's receiver in Barbanti. Doing so would modify Barbanti's system with Mendez's receiver in order to provide accurate information related to a low tire pressure thereby displaying a warning to the driver to ensure a safe driving wherein precluding regrettable accidents that can lead to property damaged and severe injury even death as taught by Mendez (col. 1, lines 6-50).

Regarding claims 3-4, Barbanti and Mendez disclose all the limitations in claim 1 and Mendez further discloses a first member for feeding energy for sending a warning signal (fig. 2; col. 2, lines 46-61). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Mendez's energy for sending a warning signal in Barbanti. Doing so would modify Barbanti's system with Mendez's feeding energy for sending a warning signal in order to provide full power that permit the warning signal to transmit efficiently instructions to the driver to ensure a safe driving wherein precluding regrettable accidents that can lead to property damaged and severe injury even death as taught by Mendez (col. 1, lines 6-50).

Regarding claim 5, Barbanti and Mendez disclose all the limitations in claim 1 and Mendez further discloses a signal indicating the charge condition of the electric generators (fig. 2). Thus, it would have been obvious to one of ordinary skill in

Art Unit: 2636

the art at the time the invention was made to incorporate Mendez's electric generators in Barbanti. Doing so would modify Barbanti's system with Mendez's electric generators in order to provide full power that permit the warning signal to transmit efficiently instructions to the driver to ensure a safe driving wherein precluding regrettable accidents that can lead to property damaged and severe injury even death as taught by Mendez (col. 1, lines 6-50).

Regarding claim 6, Barbanti discloses a pre-established time periods, of signals indicating the own proper functioning condition (col. 8, lines 39-58; col. 10, lines 58-59; col. 11, lines 1-6).

Regarding claim 7, Barbanti discloses the transmission of the signal of the proper functioning condition of the apparatus at pre-established time periods is not enabled when the group commutes the switch (col. 8, lines 35-58; col. 12, lines 37-57).

Regarding claims 8-11, Barbanti and Mendez disclose all the limitations in claim 1 and Mendez further discloses every single apparatus uses an own identifying code (col. 2, lines 35-46). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Mendez's electric generators in Barbanti. Doing so would modify Barbanti's system with Mendez's identifying code in order to detect the abnormal conditions of a tire and transmit accurate information related the tire to the driver to ensure a safe driving wherein precluding regrettable accidents that can lead to property damaged and severe injury even death as taught by Mendez (col. 1, lines 6-50).

Regarding claims 13-14, Barbanti discloses winding linked to a magnetic field (transmitted by induction) (col. 10, lines 42-57; fig. 1)

Regarding claim 15, Barbanti discloses bi-directional transmitting system capable of limiting the feeding of energy just when the vehicle is running (col. 5, lines 18-57; col. 10, lines 25-57).

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barbanti Giovanni in view of Mendez and further in view of Tsujita (US 6,604,416).

Regarding claim 12, Barbanti and Mendez disclose all the limitations in claim 1 but fail to explicitly disclose pre-established time periods when the vehicle is stationary to save energy.

However, Tsujita discloses pre-established time periods when the vehicle is stationary to save energy (col. 6, lines 27-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Tsujita's vehicle stationary in Barbanti and Mendez. Doing so would modify Barbanti and Mendez's system with Tsujita's vehicle stationary by turning on and off the battery in order to save energy when the engine is stopped thereby enabling the driver to monitor accurately the conditions of the tires for the safety purposes as taught by Tsujita (col. 1, lines 11-37).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lin (US 6,501,372) discloses tire condition sensor communication with unique sampling on vehicle-side diversity antenna array.

Dufournier et al. (US 6,397,670) discloses device for detecting vibrating signal caused by tire engaging safety insert after pressure loss in time.

Gee et al. (US 4,311,985) discloses tire pressure monitor and deenergization circuit therefore.

Koch et al. (US 5,562,787) discloses method of monitoring conditions of vehicle tires.

Lowe et al. (US 5,541,574) discloses transponder system for communicating with a vehicle tire.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Previl whose telephone number is (571) 272-2971. The examiner can normally be reached on Monday-Thursday. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass can be reached on (571) 272-2981. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel Previl
Examiner
Art Unit 2636

DP
November 22, 2005.



JEFFERY HOFSSASS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600